



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/596,003 | 06/15/2000 | Lior Shabtay | 1-1-1-6 | 1200 |

7590 02/09/2005

Docket Administrator
Lucent Technologies Inc Room 3C-512
600 Mountain Avenue
P O Box 636
Murray Hill, NJ 07974-0636

EXAMINER

FOX, JAMAL A

ART UNIT PAPER NUMBER

2664

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/596,003

Applicant(s)

SHABTAY ET AL.

Examiner

Jamal A Fox

Art Unit

2664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-80 is/are pending in the application.
- 4a) Of the above claim(s) 45-48, 55, 60, 61 and 78-80 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-36, 41-44, 56-59 and 62-69 is/are allowed.
- 6) ☒ Claim(s) 37-40, 49, 51, 54, 70-72 and 74-76 is/are rejected.
- 7) ☒ Claim(s) 50, 52, 53, 73 and 77 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/15/00 & 10/20/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 37-40, 49-51 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ross et al.

Referring to claim 37, Ross et al. discloses a method of performing policy enforcement by a switch, comprising: receiving a plurality of frames (col. 4 lines 65-67); comparing (flow label, col. 5 lines 5-10) the values of one or more fields (Fig. 4) of the determined frames to respective fields of entries of the list; and forwarding, discarding (deny, col. 5 lines 23-30) or further analyzing frames determined not to be compared, but does not explicitly teach of determining whether to compare the values of one or more fields of at least some of the plurality of frames to entries of a list of policies of groups of frames. However, determining based on the rule elements loaded into the CAM, the comparing will either match a CAM entry or not is disclosed in (col. 5 lines 10-14). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included determining whether to compare the values of one or more fields of at least some of the plurality of frames to entries of a list

Art Unit: 2664

of policies of groups of frames because it is part of a rule-based routing or switching decision process (col. 6 lines 1-4) such as ACL processing as suggested by Ross et al.

Referring to claim 38, Ross et al. discloses a method according to claim 37, wherein determining whether to compare comprises determining based on the physical port from which the frame was received (col. 8 lines 11-31 and col. 10 line 52-col. 11 line 3).

Referring to claim 39, Ross et al. discloses a method according to claim 37, wherein determining whether to compare comprises determining based on the protocol of the frame (col. 13 lines 50-60).

Referring to claim 40, Ross et al. discloses a method according to claim 37, wherein further analyzing comprises transferring to a processor of the switch (DBus, col. 7 lines 55-67).

Referring to claim 49, Ross et al. discloses a method of performing policy enforcement by a switch, comprising: receiving a plurality of frames; comparing at least some of the received frames to a list of groups of frames and respective policies (col. 5 lines 7-22); but does not explicitly teach of creating entries in the list for less than all of the compared frames for which no match was found in the comparison to the list (col. 5 lines 23-30). However, entries that were created for some of the compared frames are disclosed in (col. 25 line 61-col. 26 line 2). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included creating entries in the list for less than all of the compared frames for which no match

was found in the comparison to the list in order to provide for additional level of flexibility for rule element checking as suggested by Ross et al.

Referring to claim 51, Ross et al. discloses a method according to claim 49, but does not explicitly teach wherein creating entries in the list for less than all of the compared frames comprises creating entries only for frames belonging to connectionless protocols. However, Ross et al. discloses UDP, which is a connectionless protocol in (col. 13 line 65-col. 14 line 63). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included creating entries in the list for less than all of the compared frames comprises creating entries only for frames belonging to connectionless protocols because ACLs give you the ability to specify which protocols and/or frames to permit or deny as suggested by Ross et al.

Referring to claim 54, Ross et al. discloses a method according to claim 49, but does not explicitly teach of comprising determining for compared frames, a probability that additional frames of the same session will be received by the switch and creating entries only for frames with a probability higher than a determined level. However, Ross et al. discloses pre-processing of the elements of the flow label (col. 7 lines 40-52) and a Layer 4 Mapping Unit (col. 8 lines 11-63), which provides logical operations. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included comprising determining for compared frames, a probability that additional frames of the same session will be received by the switch and creating entries only for frames with a probability higher than a determined level in

Art Unit: 2664

order to prevent multiple entries in a CAM that apply to a given complex rule so that CAM size is limited and cost of the device stays minimal as suggested by Ross et al.

3. Claims 70-72, 74 and 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zaumen et al.

Referring to claim 70, Zaumen et al. discloses a method of updating a policy table (Fig. 2) of a switch, comprising:

receiving (newly arrived packet at the subsystem 110, col. 5 lines 40-45) a frame which is not directed to the switch; and

performing layer-2 switching of the received frame (col. 5 lines 25-39 and col. 3 lines 35-45), but does not explicitly teach of creating an entry in the policy table of the switch, for the session to which the received frame belongs. However, entries in the address table are disclosed in (col. 6 lines 33-37). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included creating an entry in the policy table of the switch, for the session to which the received frame belongs because entries have to be created in order to define flow membership as suggested by Zaumen et al.

Referring to claim 71, Zaumen et al. discloses a method according to claim 70, comprising determining whether the received frame requires non-default policy enforcement (col. 5 lines 45-56), but does not explicitly teach of creating the entry is performed only if the received frame requires non-default policy enforcement. However, the CPS 130 can be configured to handle the forwarding aspects based on its software routines (col. 5 lines 50-56). Therefore it would have

been obvious to one having ordinary skill in the art at the time the invention was made to have included creating the entry is performed only if the received frame requires non-default policy enforcement because the software routines can be configured to handle the forwarding aspects as suggested by Zaumen et al.

Referring to claim 72, Zaumen et al. discloses a method according to claim 71, wherein the received frame belongs to a connection based protocol (TCP, col. 5 lines 7-14 and col. 6 line 10).

Referring to claim 74, Zaumen et al. discloses a method according to claim 71, wherein determining whether the received frame requires non-default policy enforcement comprises checking whether the frame belongs to a group which requires frame counting (counter, col. 8 lines 21-28).

Referring to claim 76, Zaumen et al. discloses a method according to claim 71, wherein determining whether the received frame

requires non-default policy enforcement comprises checking whether the frame requires a non default QoS behavior (QoS, col. 5 lines 48-56).

4. Claim 75 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zaumen et al in view of Ross et al.

Referring to claim 75, Zaumen et al. discloses a method according to claim 71, but does not explicitly teach wherein determining whether the received frame requires non-default policy enforcement comprises checking whether the frame violates security rules. However, Ross et al. discloses security rules (ACL, col. 2 lines 26-38).

Therefore, it would have been obvious to one having ordinary skill in the art at the time

the invention was made to have included determining whether the received frame requires non-default policy enforcement comprises checking whether the frame violates security rules in order for the CAM to enhance the efficiency of rule processing by providing an additional level of flexibility for rule element checking as suggested by Ross et al.

5. Claim 70 is rejected under 35 U.S.C. 103(a) as being unpatentable over Viswanath et al. (U.S. 6,798,788).

Referring to claim 70, Viswanath et al. discloses a method of updating a policy table of a switch (Fig. 1, switch 12 and respective portions of the spec.), comprising: receiving (receives, col. 4 lines 40-45) a frame which is not directed to the switch; and performing layer-2 switching (layer 2 switching, col. 4 lines 40-52) of the received frame, but does not explicitly teach of creating an entry in the policy table of the switch, for the session to which the received frame belongs. However, entries in the policy table are disclosed in (col. 6 lines lines 40-43, col. 7 lines 53-65 and col. 8 lines 30-35).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included creating an entry in the policy table of the switch, for the session to which the received frame belongs because the entries are created when the IP source address, IP destination address, TCP/UDP input port, TCP/UDP output port, and corresponding policy identifier are stored by the policy cache as suggested by Viswanath et al.

Response to Arguments

6. Applicant's arguments with respect to claims 37-40, 49-51, 54, 70-72, 74 and 76 have been considered but are moot in view of the new ground(s) of rejection.

7. Applicant's arguments filed 6/15/2000 have been fully considered but they are not persuasive.

8. In response to applicant's argument that Ross et al. fails to supplement the fundamental deficiencies of Zaumen et al., the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Allowable Subject Matter

9. Claims 1-36, 41-44, 56-59 and 62-69 are allowed.

10. Claims 50, 52, 53, 73 and 77 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 305-3988, (for formal communications intended for entry)

Or:

(703) 305-3988 (for informal or draft communications, please label
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121
Crystal Drive, Arlington, VA. 22202, Sixth Floor (Receptionist).

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jamal A. Fox whose telephone number is (571) 272-3143. The examiner can normally be reached on Monday-Friday 6:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571) 272-3134. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9315 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

Application/Control Number: 09/596,003

Page 10

Art Unit: 2664


Jamal A. Fox

